<center>REMARKS</center>

The present application has been reviewed in light of the Office Action dated May 18, 2011. Claims 1, 4 to 7, 10 to 13 and 16 to 19 are pending, with Claims 18 and 19 having been newly added. Claims 1, 7 and 13 are independent. Reconsideration and further examination are respectfully requested.

Claims 1 and 4 were rejected under 35 U.S.C. § 103(a) over U.S. Patent 5,943,508 (Penney) in view of alleged Applicant Admitted Prior Art (AAPA), and further in view of U.S. Patent 6,587,735 (Yaguchi) and U.S. Patent Publication 2008/0028369 (Sasaki). Claims 7 and 13 were rejected under § 103(a) over Penney in view of AAPA and Sasaki. Claims 10 and 16 were rejected under § 103(a) over Penney in view of AAPA, and further in view of Yaguchi and Sasaki. Claims 5, 6, 11, 12 and 17 were rejected under § 103(a) over Penney, in view of AAPA, and further in view of Yaguchi, U.S. Patent Application Publication 2005/0047666 (Mitchell) and Sasaki. Reconsideration and withdrawal of the rejections are respectfully requested.

Independent Claim 1 is directed to an image processing apparatus including a predetermined number of code converting units, with each code converting unit configured to execute coding and decoding of image data. The predetermined number of code converting units includes reserved code converting units and non-reserved code converting units, such that the number of reserved code converting units is less than the number of all code converting units. A plurality of request-source task units are each configured to issue a processing request, and the number of request-source task units is greater than the predetermined number of code converting units.

According to one feature, each request-source task unit has a priority set in advance. Each request-source task unit having a high priority reserves one of the reserved

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code converting units, and each request-source task unit having a low priority competes for at least one of a plurality of the non-reserved code converting units, with the number of non-reserved code converting units being less than the number of request-source task units having the low priority.

When the processing request is received from one of the plurality of request-source units having the high priority, an assigning unit of the image processing apparatus assigns the reserved code converting unit to a task corresponding to the request-source task unit that issued the processing request. On the other hand, when the processing request is received from one of the plurality of request-source units having the low priority and one of the plurality of non-reserved code converting units is an idle code converting unit, the assigning unit assigns an idle code converting unit to the task corresponding to the request-source task unit that issued the processing request.

Independent Claim 7 is directed to an image processing method for an image processing apparatus including a predetermined number of code converting units including reserved code converting units and non-reserved code converting units, such that the number of reserved code converting units is less than the number of all code converting units. The method includes a processing-request issuing step of issuing a processing request from a request-source task unit of a plurality of request-source task units to perform a corresponding task. The number of the plurality of request-source task units is greater than the predetermined number of code converting units, and the plurality of request-source task units have priorities corresponding to respective tasks.

The processing request is received, and it is determined whether the processing request issued by the request-source task unit should be processed with priority. Each request-source task unit having a high priority reserves one of the reserved code

converting units, and each request-source task unit having a low priority competes for at least one of a plurality of the non-reserved code converting units, with the number of non-reserved code converting units being less than the number of request-source task units associated with a processing request having the low priority.

When the processing request is received from one of the plurality of request-source units having the high priority, the reserved code converting unit is assigned to a task corresponding to the request-source task unit that issued the request. On the other hand, when the processing request is received from one of the plurality of request-source units having the low priority and one of the plurality of non-reserved code converting units is an idle code converting unit, the idle code converting unit is assigned to the task corresponding to the request-source task unit that issued the request.

Independent Claim 13 is directed to a computer-readable medium, which substantially corresponds to the image processing method of Claim 7.

By virtue of the foregoing arrangement of independent Claims 1, 7 and 13, it is ordinarily possible to ensure that a task corresponding to a request-source unit having a high priority is immediately processed by a code converting unit, despite the number of request-source task units being greater than the number of code converting units.

Applicants respectfully submit that the applied art is not seen to disclose or to suggest the features of independent Claims 1, 7 and 13, and in particular, is not seen to disclose or to suggest at least the features of reserved and non-reserved code converting units, or the features of a plurality of request-source task units having priorities set in advance, wherein each request-source task unit having a high priority reserves a reserved code converting unit, and each request-source task unit having a low priority competes for at least one of a plurality non-reserved code converting units.

Penney is understood to disclose a switcher using shared processors. As shown in Figure 1 of Penney, a plurality of input sources 11 are coupled to inputs of input matrix 12, and a plurality of processors 14 are switchably coupled to the outputs of input matrix 12. Resource management module 18 communicates with input matrix 12, processors 14, and conventional switcher 16 to automatically assign one or more of processors 14 as needed at the outputs of the input matrix 12. See Penney, column 2, lines 32 to 37. For example, as noted in column 3, lines 13 to 17 of Penney, for compressed input sources 11, resource manager 18 simply assigns a next available compression decoder 14 to the appropriate output of the input matrix 12. Thus, Penney is understood to assign processors 14 on an as needed basis, without regard to a priority of input sources 11.

The Office Action directs attention to column 2, lines 47 to 53 of Penney in asserting that Penney discloses request-source task units with priorities set in advance, wherein each request-source task unit having a high priority reserves one of a predetermined number of code converting units. Applicants respectfully disagree.

The cited portion of Penney is seen to disclose that in a case of intra-frame coding, one of the outputs of input matrix 12 is assigned to one of input sources 11 in response to a tally signal at a time corresponding to the beginning of a first frame of video that is used at the output, and that resource manager 18 assures that one of compression decoders 14 is coupled to the output to decompress the data. However, there is no mention of prioritizing any of input sources 11 in this portion of Penney, and therefore, this is not seen to depart from the general assignment of processors 14 on an as-needed basis, as discussed above.

Accordingly, Penney is not seen to disclose a plurality of request-source task units having priorities set in advance, wherein each request-source task unit having a

high priority reserves a reserved code converting unit, and each request-source task unit having a low priority competes for at least one of a plurality of non-reserved code converting units.

Penney is likewise not seen to disclose or suggest the notion of non-reserved code converting units.

The Office Action cites to page 2, lines 9 to 14 of the specification as AAPA disclosing code processing units being requested to execute processing. However, this portion of the specification fails to disclose or to suggest priorities of request-source task units.

In addition, the cited portion of AAPA is not seen to disclose the concept of non-reserved code converting units.

Accordingly, as with Penney, AAPA is not seen to disclose or suggest reserved and non-reserved code converting units, and is not seen to disclose or suggest a plurality of request-source task units having priorities set in advance, wherein each request-source task unit having a high priority reserves a reserved code converting unit, and each request-source task unit having a low priority competes for at least one of a plurality non-reserved code converting units.

Yaguchi is seen to disclose a data processing apparatus that selects a hardware processor if it is determined that the time required for processing is less than a predetermined time, and selects a software processor if the time required for processing is determined to be equal to or greater than the predetermined time.

However, Yaguchi is not seen to disclose or to suggest reserved and non-reserved code converting units, and is not seen to disclose or suggest a plurality of request-source task units having priorities set in advance, wherein each request-source task unit

having a high priority reserves a reserved code converting unit, and each request-source task unit having a low priority competes for at least one of a plurality of non-reserved code converting units.

Sasaki and Mitchell have been reviewed, but are not seen to compensate for the above noted deficiencies of Penney, AAPA and Yaguchi.

Applicants further submit that a combination of the applied art, assuming that such a combination would even be permissible, would not share the advantageous effects of the arrangement claimed herein. For example, such a combination would not ordinarily ensure that a task corresponding to a request-source unit having a high priority is immediately processed by a code converting unit, despite the number of request-source task units being greater than the number of code converting units.

In view of the foregoing amendments and remarks, independent Claims 1, 7 and 13 are believed to be allowable over the applied art.

The other claims in the application are each dependent from the independent claims discussed above and are believed to be allowable over the applied art for at least the same reasons. Because each dependent claim is deemed to define an additional aspect, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California Office by telephone at (714) 540-8700. All correspondence should be directed to our address listed below.

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